

resource constrained in terms of computation power, data storage, battery life or the like by more efficiently utilizing the cloud computing resources.

[0011] In one embodiment, a method is provided that includes receiving a request for cloud services issued by an application executed by a mobile terminal. The method of this embodiment creates an application agent based upon the application that issued the request and causes a request to be transmitted to a cloud service provider in response to the request for cloud services. In this embodiment, the method also receives a response from the cloud service provider and causes a response to be provided to the mobile terminal based upon the response from the cloud service provider.

[0012] In another embodiment, an apparatus is provided that includes at least one processor and at least one memory, including computer program instructions with the at least one memory and the computer program instructions configured to, with the at least one processor, cause the apparatus at least to receive a request for cloud services issued by an application executed by a mobile terminal. The at least one memory and the computer program instructions are further configured to, with the at least one processor, cause the apparatus of this embodiment to create an application agent based upon the application that issued the request and to cause a request to be transmitted to a cloud service provider in response to the request for cloud services. The at least one memory and the computer program instructions are further configured to, with the at least one processor, cause the apparatus of this embodiment to receive a response from the cloud service provider and to cause a response to be provided to the mobile terminal based upon the response from the cloud service provider.

[0013] In a further embodiment, a computer program product is provided that includes at least one non-transitory computer-readable storage medium bearing computer program instructions embodied therein for use with a computer with the computer program instructions including instructions configured to receive a request for cloud services issued by an application executed by a mobile terminal. The computer program instructions of this embodiment also include instructions configured to create an application agent based upon the application that issued the request and instructions configured to cause a request to be transmitted to a cloud service provider in response to the request for cloud services. The computer program instructions of this embodiment also include instructions configured to receive a response from the cloud service provider and instructions configured to cause a response to be provided to the mobile terminal based upon the response from the cloud service provider.

[0014] In yet another embodiment, an apparatus is provided that includes means for receiving a request for cloud services issued by an application executed by a mobile terminal, means for creating an application agent based upon the application that issued the request and means for causing a request to be transmitted to a cloud service provider in response to the request for cloud services. The apparatus of this embodiment also includes means for receiving a response from the cloud service provider and means for causing a response to be provided to the mobile terminal based upon the response from the cloud service provider.

[0015] In one embodiment, a method is provided that includes executing an application and, based upon the execution of the application, causing a request for cloud services to be issued to a mobile hub that is associated with a communications network. The method of this embodiment also

includes receiving a response to the request from a cloud service provider via the mobile hub and continuing the execution of the application based at least in part upon the response to the request.

[0016] In another embodiment, an apparatus is provided that includes at least one processor and at least one memory including computer program instructions with the at least one memory and the computer program instructions configured to, with the at least one processor, cause the apparatus at least to execute an application and, based upon execution of the application, to cause a request for cloud services to be issued to a mobile hub that is associated with the communications network. The at least one memory and the computer program instructions are further configured to, with the at least one processor, cause the apparatus of this embodiment to receive a response to the request from a cloud service provider via the mobile hub and to continue the execution of the application based at least in part upon the response to the request. In a further embodiment, a computer program product is provided that includes at least one non-transitory computer-readable storage medium bearing computer program instructions embodied therein for use with a computer with the computer program instructions including instructions configured to execute an application and, based upon execution of the application, instructions configured to cause a request for cloud services to be issued to a mobile hub that is associated with a communications network. The computer program instructions of this embodiment also include instructions configured to receive a response to the request from a cloud service provider via the mobile hub and instructions configured to continue the execution of the application based at least in part upon the response to the request.

[0017] In yet another embodiment, an apparatus is provided that includes means for executing an application and, based upon the execution of the application, means for causing a request for cloud services to be issued to a mobile hub that is associated with a communications network. The apparatus of this embodiment also includes means for receiving a response to the request from a cloud service provider via the mobile hub and means for continuing the execution of the application based at least in part upon the response to the request.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] Having thus described certain example embodiments of the present invention in general terms, reference will hereinafter be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

[0019] FIG. 1 is a schematic representation of a mobile cloud computing system;

[0020] FIG. 2 is a schematic representation of a mobile cloud computing system in accordance with an example embodiment of the present invention;

[0021] FIG. 3 is a block diagram of an apparatus that may be embodied by a mobile terminal or a mobile cloud service provider, such as a mobile hub, and that may be specifically configured in accordance with an example embodiment of the present invention;

[0022] FIG. 4 is an architectural representation of a mobile cloud computing system in accordance with an example embodiment of the present invention;

[0023] FIG. 5 is an architectural representation of a mobile terminal in accordance with an example embodiment of the present invention;